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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,110	04/10/2006	Ulrich Simon	288320US0PCT	9373
22850	7590	05/14/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
DOLLINGER, MICHAEL M				
ART UNIT		PAPER NUMBER		
4171				
NOTIFICATION DATE		DELIVERY MODE		
05/14/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/575,110

**Applicant(s)**

SIMON ET AL.

**Examiner**

MICHAEL DOLLINGER

**Art Unit**

4171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF 298)  
Paper No(s)/Mail Date 07/10/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 3-5 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 3-5 depend from claim 1 and merely recite the limitations set forth in claim 1.
2. Claims 2-4, 6-14 and 16 are objected to because of the following informalities: unclear terminology. Appropriate correction is required.
3. Regarding claims 2-4, 10, 13 and 14, the term "amine-regulated" in line 2 of claims 2-4, 10, 13 and 14 is unclear. For purposes of the examination, examiner takes the position that this term means "amine-terminated" on the basis that in US application 09/973,890 (from patent US 6,784,227) which has similar subject matter and one common inventor, Ulrich Simon, the term "regulated" was replaced with "terminated" in applicant's amendment submitted on March 31, 2004.
4. Regarding claims 6-14 and 16, the claims require the preposition "in" after the term "as claimed" and before the term "claim 1."

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1-12 and 14-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term composition is confusing as the invention as claimed is not a composition, but two layer adhesive structure on a substrate. A composition is the kinds and numbers of materials that make up a mixture, and does not involve mixtures of phases, dots, layers etc., as recited. Applicants may claim as their invention a two component adhesive composition in which only the materials of the two layers are recited, a multilayer adhesive structure using the type of adhesive claimed, or the like. For the purposes of examination, examiner takes the position that the claims are directed to a multilayer adhesive structure.
7. Claim 1 recites the limitations "upper dot" and "lower dot" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-9, 11, 13-15, 17 and 18 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3, 5-12, 15, 16, and 21 of copending Application No. 10/575104 in view of Simon et al. (US 6,300,413 B1). The copending claims outline the same invention as the instant claims, with the only difference being that the instant claims require a lower dot comprising a copolyamide and the copending claims require the additional limitation that the lower dot comprises an OH-terminated polyester.

10. Simon et al. teach a two layer adhesive structure in the double dot formation in which the upper and lower dot are both amine-terminated copolyamides (column 1 lines 10-17). Simon et al. note that the structures having both upper and lower dots comprising amine terminated copolyamides have optimum attachment between upper and lower dot (column 4 lines 38-42) resulting in high resistance to hydrolytic attack and henceforth considerably high stability during laundering (column 4 lines 49-54).

11. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used amine terminated copolyamides for both the upper and lower dots as taught by Simon et al. in the multilayer adhesive structure of the copending claims with the reasonable expectation of success of improved resistance to hydrolytic attack and henceforth considerably high stability during laundering.

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Instant Claim	Corresponding Copending Claims
1	1
2	3
3	1
4	1
5	5
6	6
7	7
8	8
9	9
10	-
11	10
12	-
13	11
14	12
15	21
16	-
17	15
18	16

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-10, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Simon et al. (US 6,300,413 B1).

14. Regarding claims 1 and 3-5, applicants' claim a multilayer adhesive structure with

1) upper and lower dots based on an amine-terminated crosslinkable copolyamide, 2) a

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crosslinker and 3) an acrylic and/or polyurethane dispersion. Simon et al. disclose a crosslinkable hot melt composition applied according to the double dot technique wherein 1) the upper and lower dots comprise amine-terminated copolyamide (column 1 line 10), 2) a crosslinker (column 2 line 42), and 3) acrylic and polyurethane dispersions (column 1 line 56-57).

15. Regarding claim 2, applicants claim the copolyamide with a melting range of 90°C to 150°C and a solution viscosity between 1.2 and 1.7. Simon et al. disclose identical ranges for these properties (column 3 lines 25-30).

16. Regarding claims 6 and 7, applicants claim a crosslinker that is an isocyanate that has more reactive groups per molecule and a melting range from 100°C and 130°C. Simon et al. disclose crosslinkers that are solid isocyanates with more than two free NCO groups and a melting range of 100-130°C (column 3 lines 3-5).

17. Regarding claim 8, applicants claim a crosslinker that is an epoxide having a melting range from 90 to 130°C, a molecular weight range from 2000 to 6000 and more than two epoxide groups per molecule. Simon et al. disclose crosslinking components that are epoxides having a melting range from 90-130°C, a molecular weight range from 2000-6000, and more than two epoxide groups per molecule.

18. Regarding claim 9, applicants claim a crosslinker that is a pulverulent free or blocked isocyanate. Simon et al. disclose a trimerized diisocyanate which has been passivated and processed as an aqueous paste (column 2 lines 44-48).

19. Regarding claim 10, applicants claim upper and lower dots wherein the copolyamides have different melting temperatures. In the Example, Simon et al.

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disclose a double dot adhesive structure wherein the upper dot is a VESTAMELT X1027-P816 powder and the lower dot is a mixture of VESTOMELT X 1027-P1 and lower melting point polymers such as VESTANAT T 1890 and VESTOPLAST 408. The Example in Simon et al. necessarily has an upper and lower dot with polyamides having different melting points.

20. Regarding claim 12, applicants claim the acrylic component in the multi layer adhesive structure as a di- and/or triacrylate. In the Example Simon et al. use MIROX TX as the acrylic component. Given other products in the MIROX line are diacrylates (MIROX AM, see Leenders et al. US 6,890,584 B2), examiner has reason to assume that MIROX TX is a di- or triacrylate.

21. Regarding claim 16, applicants claim the multilayer adhesive structure wherein the copolyamides are based on lactames (LL, CL), dimer fatty acids and corresponding dicarboxylic acids and diamines having chain lengths of C2 to C15 and piperazine. Simon et al. disclose the use of VESTAMELT X 1027-P1 as the copolyamide (column 3 line 53). VESTAMELT X 1027-P1 is the copolyamide used in the Example of the present specification and described as meeting all of the limitations of claim 16.

22. Regarding claim 17, applicants claim a method for using the multilayer adhesive structure for coating and/or lamination of sheet-like structures. Simon et al. disclose the use of their invention as coating and/or lamination of sheet-like structures (column 2 lines 27-29).

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23. Regarding claim 18, applicants claim an interlining material for clothing composed of the multilayer structure adhesive. The Example in Simon et al. is an interlining material composed of a corresponding adhesive (column 4 line 9).

***Claim Rejections - 35 USC § 103***

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. Claim 12 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Simon et al. Applicants claim the use of a di- or triacrylate as the acrylic component of the multi layer adhesive structure. Simon et al. disclose the use of MIROX TX as the acrylic component. It would have been obvious to one of ordinary skill in the art to have substituted MIROX AM for MIROX TX in the adhesive of Simon et al. MIROX AM is a diacrylate and, like MIROX TX, is useful as a thickener. One would have switched MIROX TX for MIROX AM because this is a simple substitution of one known, equivalent element for another to obtain predictable results. Absent any evidence to the contrary, there would have been reasonable expectation of success of ample thickening with MIROX AM.

26. Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon et al. as applied to claim 1 above, and further in view of Kohlhammer et al.

(US 5,977,244). Applicants claim a cross-linking component that is an epichlorohydrin and the crosslinking is accelerated by a catalyst.

27. Regarding claim 11, applicants claim the use of epichlorohydrin as the crosslinker. Regarding claim 15, applicants claim the multilayer adhesive structure wherein the crosslinking reaction is accelerated by catalysis. Simon et al., discussed above, do not teach the use of epichlorohydrin as a crosslinker for the acceleration of crosslinking or the use of accelerating catalysts.

28. Kohlhammer et al. disclose epichlorohydrin products as crosslinkers for textile molding compositions (column 3, lines 47-50). Kohlhammer et al. disclose crosslinking catalysts for the textile molding composition (column 3, lines 58-60). By definition, catalysis accelerates chemical processes by reducing activation energies of reaction.

29. Absent any evidence to the contrary, there would have been a reasonable expectation of success with the use of an epichlorohydrin as the epoxide crosslinker. It would have been obvious to one of ordinary skill in the art to have used an epichlorohydrin for the crosslinker as taught by Kohlhammer et al. in a multilayer adhesive structure taught by Simon et al. in order to crosslink the material. Simon et al. teach that it is within the skill of the art to use an isocyanate crosslinker in a double dot adhesive and Kohlhammer et al. teach that it is within the skill of the art to use epichlorohydrin as the epoxide crosslinkers. One would have substituted used an epichlorohydrin as the epoxide crosslinker with the reasonable expectation of sufficient crosslinking; the present modification is merely the substitution of one known equivalent element for another to obtain predictable results.

30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to catalyze the crosslinking reaction in Simon et al. with the reasonable expectations of decreased processing time and energy.

31. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simon et al. as applied to claim 1 above, and further in view of Mattor et al. (US 4,282,054). Applicants claim the use of the lower dot of the multilayer adhesive structure as a strikethrough barrier.

32. Simon et al. fail to teach using a reactive lower dot as a strikethrough barrier. Mattor et al. further teach that crosslinkable resins can be used as a strikethrough barrier on a sheet-like structure (column 1, liners 53-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a crosslinkable polymer lower dot as a strikethrough barrier.

33. Claim 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Simon et al. as applied to claim 1 above, and further in view of Hiratsuka et al. (US 5,019,347). Applicants claim the application of the lower dot in a halftone formation as a paste.

34. Simon et al. disclose application of a lower dot as a paste comprising a passivated isocyanate (column 2, lines 44-48) but fail to disclose application of the lower dot in halftone formation.

35. Hiratsuka et al. teach application of an multilayer adhesive coating applied to a sheet-like structure in a formation of dots distributed microscopically at random and of varying size and shape but appear essentially uniformly in total (Column 4, lines 18-21). Examiner takes the position that any non uniform distribution of dots that appears essentially uniform in total is considered the halftone method. Hiratsuka et al. teach that the adhesive area ratio can be adjusted (column 4, lines 28-34) and henceforth optimized to the thickness of the substrate by adjusting the size and width of the dots (column 4, lines 38-41).
36. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the halftone method with the multilayer adhesive structure of claim 1 because Simon et al. teach that it is within the skill of the art to form a double dot adhesive wherein the lower dot is applied as a paste and Hiratsuka et al teach it is within the skill of the art to apply an adhesive in the double dot method. One would have applied the lower dot in a halftone method in order to have controlled the amount of adhesive applied and receive the expected benefit of low waste application with variable adhesion and texture of the final interlining. Absent any evidence to the contrary, there would have been reasonable expectation of success of optimizing the adhesive area ratio to the thickness of the sheet-like structure to which the adhesive is applied.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL DOLLINGER whose telephone number is (571)270-5464. The examiner can normally be reached on Monday - Thursday 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner, Art Unit 1796

/MMD/